ABSTRACT

By using a first dynamic model of a moving robot 1, a provisional motion, which indicates a provisional value of a desired motion of the robot 1, is created such that a

5   desired value of a floor reaction force moment horizontal component and a permissible range of a translational floor reaction force horizontal component are satisfied on the first dynamic model. The difference between a floor reaction force produced on a second dynamic model, which

10 has a dynamic accuracy that is higher than that of the first dynamic model, by the provisional motion and a floor reaction force produced on the first dynamic model is defined as a floor reaction force error. Based on this floor reaction force error, the provisional motion is

15 corrected on the first dynamic model to generate a desired motion. The desired motion is generated such that the value obtained by adding the floor reaction force error to the floor reaction force generated on the first dynamic model satisfies the aforesaid desired value and permissible

20 range.